

# In the United States Court of Federal Claims

No. 11-335C

(Filed: January 23, 2017)

\*\*\*\*\*

WYODAK RESOURCES  
DEVELOPMENT CORP.,

Plaintiff,

v.

THE UNITED STATES,

Defendant.

\*

\*

\*

\*

\* Surface Mining Control and  
\* Reclamation Act of 1977;  
\* American Society for Testing and  
\* Materials Coal Testing Standards.

\*

\*

\*

\*

\*\*\*\*\*

*Walter F. Eggers, III*, Holland & Hart LLP, Cheyenne, Wyoming, for Plaintiff.

*A. Bondurant Eley*, Senior Trial Counsel, and *Kara M. Westerkamp*, Trial Attorney, with whom were *Scott D. Austin*, Assistant Director, *Robert E. Kirschman, Jr.*, Director, and *Benjamin C. Mizer*, Principal Deputy Assistant Attorney General, Commercial Litigation Branch, Civil Division, U.S. Department of Justice, Washington, D.C., for Defendant.

## OPINION AND ORDER

WHEELER, Judge.

Plaintiff Wyodak Resources Development Corp. (“Wyodak”) brought this case seeking a partial refund of reclamation fees that it paid to the Office of Surface Mining Reclamation and Enforcement (“OSM”) pursuant to the Surface Mining Control and Reclamation Act of 1977 (“SMCRA”). Wyodak claims that it originally failed to recognize the presence of significant amounts of lignite in its coal mine when it paid its reclamation fees. Lignite, which contains less energy than other types of coal, is subject to lower reclamation fees under SMCRA. Therefore, because Wyodak originally paid reclamation fees solely for the higher-energy subbituminous coal, it would be entitled to a refund if its mine actually contained appreciable amounts of lignite.

The Court conducted a four-day trial in Denver, Colorado during July 11–14, 2016. At trial, Arthur Hoeft, Brad Stock, Sheila Owens, Jane Youngman (formerly Jane Gray), and Robert Hollibaugh testified for Wyodak, and James Luppens testified for the Government. The parties submitted simultaneous post-trial briefs and response briefs on November 4, 2016 and December 7, 2016 respectively, and the Court heard closing arguments on January 11, 2017.

The trial centered on the techniques Mr. Hoeft used to test for lignite at Wyodak’s mine. Ultimately, the Court finds that Mr. Hoeft’s methodology does not follow accepted standards for coal sample testing, and the evidence at trial further showed that Mr. Hoeft’s tests were not reliable. Therefore, the Court finds that Wyodak has not shown that its mine contains appreciable quantities of lignite, and Wyodak is not entitled to a reclamation fee refund.

### Discussion

#### A. Factual and Procedural History

Wyodak owns and operates the Wyodak Mine in the Powder River Basin, located near Gillette, Wyoming. Joint Stips. of Fact (“Stip.”) ¶ 2, Dkt. No. 87 (filed June 24, 2016). As a coal mine operator and coal producer, Wyodak pays reclamation fees to the U.S. Government as required by SMCRA, 30 U.S.C. §§ 1201–1328 (2012). OSM administers the reclamation fee program and assesses a reclamation fee on every ton of coal that Wyodak produces from its mine. 30 U.S.C. § 1232(a); 30 C.F.R. § 870.12(a).

Coal deposits—called “seams”—are “ranked” along a continuum from lignite, which contains the least energy, to higher-energy coals like subbituminous coal. Hoeft, Tr. 85; Luppens, Tr. 586. The different ranks of coal result from the differing depths and temperatures to which the original peat deposits were subjected. Luppens, Tr. 587. As peat (and later, coal) is subjected to more pressure and heat, it gradually increases in rank. Id.

Under SMCRA’s implementing regulations, coal producers pay less in reclamation fees for lignite coal than for other, higher-ranked types of coal. 30 U.S.C. § 1232(a). The Regulations define “lignite coal” as “consolidated lignite coal having less than 8,300 British thermal units [Btus] per pound, moist and mineral-matter-free.” 30 C.F.R. § 870.5. The applicable regulation further provides that “[m]oist, mineral-matter free [Btus] per pound are determined by Parr’s formula, equation 3, on page 222 of ‘Standard Specification for Classification of Coals by Rank,’ in American Society for Testing and Materials ASTM D 388-77 (Philadelphia, 1977).” Id. The regulation also separately sets forth Parr’s formula. Id. In addition, the regulation defines “[a]nthracite, bituminous, and subbituminous coal” as “all coals other than lignite coal.” Id.

The only question in this case is whether part of the coal in Wyodak's mine can be ranked as lignite rather than subbituminous coal. Prior to 2006, Wyodak paid the higher reclamation fee for non-lignite coal for all of its coal production. Stip. ¶ 10. Based on Mr. Hoeft's reports, Wyodak subsequently concluded that it was entitled to pay the lower lignite reclamation fee on 12.3 percent of its total mined coal. Hollibaugh, Tr. 459–60. Wyodak thus claimed a refund for the difference between the surface mining rate and the lignite rate with respect to 12.3 percent of Wyodak's total mined tonnage from 1980 through 2006. *Id.* After an investigation, OSM concluded that Wyodak had failed to provide documentation to prove that any coal it had extracted and characterized as lignite was, in fact, lignite, and rejected Wyodak's refund claim. PX3 at 3; PX8 at 3; Owens, Tr. 362–63, 377.

Wyodak also sought an IRS exemption from the Black Lung Excise Tax ("BLET") for its alleged lignite production. PX7. After a series of exchanges with Wyodak, the IRS issued an advisory opinion on June 29, 2009, stating that a hypothetical taxpayer could be exempt from paying the BLET if it extracted lignite along with other ranks of coal. PX13. The advisory opinion noted that the hypothetical taxpayer would need to follow the applicable American Society for Testing and Materials ("ASTM") standards when testing the coal ranks. PX13 at 1. The memorandum specifically stated that "[f]or purposes of this memorandum, we assume that Taxpayer operates a mine from which taxable coal and nontaxable lignite are extracted." PX13 at 2. Therefore, the IRS advisory memorandum made no determination as to whether lignite coal was actually present at Wyodak's mine. Still, the IRS subsequently issued a refund to Wyodak of a portion of the BLET, so it did in some way determine that Wyodak had produced lignite.<sup>1</sup> Hollibaugh, Tr. 453.

Wyodak next filed this lawsuit on May 25, 2011. This Court (Damich, J.) granted the Government's motion for summary judgment and dismissed this case on November 30, 2012. The Federal Circuit reversed that decision and remanded the case. Wyodak Res. Dev. Corp. v. United States, 737 F.3d 760, 766 (Fed. Cir. 2013). The Federal Circuit's opinion was a "pure statutory construction case." *Id.* at 761. It appeared to assume that lignite was present at Wyodak's mine based on tests performed after Wyodak had extracted and blended coal from the mine. *See id.* at 763–64. Those tests indicated that lignite coal was blended with subbituminous coal after extraction. *Id.* at 762–63. OSM refused to pay the lower lignite rate on any of the blended coal because the blended coal was not lignite. *Id.* at 764. The Federal Circuit rejected OSM's interpretation, holding, "If Wyodak is able to verify the quantity of lignite coal in the mixture that it extracts from the mine by a reliable method, there is no reason that the method of extraction should be deemed to convert coal that otherwise would have been treated as 12 percent lignite into a mixture that is treated as if it contains no lignite at all." *Id.* The Federal Circuit then instructed this Court to determine whether "satisfactory evidence, pursuant to reliable methods of testing and

---

<sup>1</sup> The IRS operated with a different factual record than that before the Court in this case, so the IRS's decision to refund part of Wyodak's BLET liability is of limited value here.

ranking, show[s] that the coal extracted from [Wyodak's] mine contains an appreciable quantity of lignite.” Id. at 766. Therefore, this Court’s inquiry focuses on whether Wyodak has presented such evidence.

B. Wyodak was Required to Test its Coal in Compliance with ASTM Standards

The evidence at trial showed that the American Society for Testing and Materials (“ASTM”) standards are the only broadly accepted standards that govern coal testing in the United States. See Luppens, Tr. 574. These standards represent a consensus in the scientific community as to how coal should be ranked. See Hoeft, Tr. 51, 163; Luppens, Tr. 590–91. Therefore, the Court finds that they are the “reliable methods of testing and ranking” for purposes of determining whether lignite is present in Wyodak’s mine. See Wyodak, 737 F.3d at 766. Specifically, ASTM D 388-05, the standard that was a key focus at the trial, sets out the most reliable and most generally accepted sampling analysis and testing methodology used for coal rank determinations today. Luppens, Tr. 574; Hoeft, Tr. 163; Stock, Tr. 307; see also PX13. For ease of reference, the Court will set out relevant portions of the ASTM standards here.

Section 7.1 of ASTM D 388-05 states, in relevant part:

*7.1 Samples*— Classify a coal seam, or part of a coal seam, in any locality based on the average analysis and gross calorific value (and agglomerating character where required) of not less than three and preferably five or more face channel samples or core samples taken in different and uniformly distributed localities, either within the same mine or closely adjacent mines representing a continuous and compact area not greater than approximately four square miles in regions of geological uniformity. In regions in which conditions indicate that the coal probably varies rapidly in short distances, the spacing of sampling points and grouping of analyses to provide average values shall not be such that coals of obviously different rank will be used in calculating average values.

PX 18 at 3.

Section 7.1.1 continues:

Take channel samples by excluding mineral partings more than 1 cm (3/8 in.) and lenses or concretions (such as sulfur balls) more than 1.25 cm (1/2 in.) thick and 5 cm (2 in.) wide, as specified in Practice D 4596.

Id.

Finally, section 7.1.2 states:

A drill core sample may be used provided it was collected as specified in Practice D 5192 and meets the following provisions: core recovery is 100% of the seam, the major mineral partings and concretions are excluded as specified in 7.1.1, and drilling mud is removed from the core . . . .

Id.

Further, Section 7.2 of ASTM D 388-05 provides, in relevant part, that “[a] standard rank determination cannot be made unless samples have been obtained in accordance with 7.1.” Id. Additional ASTM standards elaborate on the sampling techniques referenced in Section 7.1. These standards are ASTM D 4596-99 (reapproved 2004) (PX20), which deals with “face channel” samples, and ASTM D 5192-99 (reapproved 2004) (PX23), which deals with core samples. See Luppens, Tr. 587–88.

Combined, these standards describe two different methods of coal sample testing: face channel sampling and core sampling. For both methods, the tester must take samples from the top to the bottom of the coal seam (this is called a “whole-seam sample”). Luppens, Tr. 608; PX20 at 1; PX18 at 3. The tester then uses the moist, mineral-matter-free Btu values of each whole seam sample to determine an average moist, mineral-matter-free Btu value, which indicates the rank of the coal in the sampled area. If the average Btu value falls below 8,300 Btu/lb, moist and mineral-matter free, then the coal is standard rank lignite. See Luppens, Tr. 609. Importantly, this process also means that it is impossible for one discrete whole-seam sample to contain more than one standard rank of coal because the Btu content of the entire whole-seam sample is averaged. Luppens, Tr. 622–23.<sup>2</sup> In sum, Wyodak’s sampling methodology needed to conform to these specific ASTM coal testing standards to credibly show that an appreciable amount of lignite existed at its mine.

---

<sup>2</sup> Though one sample may only have one rank, a seam of coal may contain multiple ranks of coal across its horizontal area. That is the point of taking multiple samples, and it is why Section 7.1 instructs samplers not to space samples in such a way that “coals of obviously different rank will be used in calculating average values.”

C. Mr. Hoeft's Tests did not Conform to the ASTM Standards

1. The February 2006 Report

For his first report in February 2006 (PX26), Mr. Hoeft took face channel samples of part of Wyodak's coal seam.<sup>3</sup> Hoeft, Tr. 83; PX26 at 4. Rather than taking samples of the entire coal seam as mandated by the ASTM standards, Mr. Hoeft first concentrated on the "lower part of the seam and . . . the bottom of the upper part of the seam." Hoeft, Tr. 83. He did so because it was easy to access these areas. *Id.* Concentrating on this part of the seam allowed Mr. Hoeft to sample only coal that was likely to have a lower Btu value. Hoeft, Tr. 75–76; Luppens, Tr. 642–45. These tests also left 65 feet of the 80-foot seam untested. *See* Hoeft, Tr. 196. Mr. Hoeft also did not take the average Btu value of discrete face channel samples (as required by the ASTM standards). Rather, he performed a novel incremental test in which he sampled the Btu levels of each vertical foot of coal in a given sample. *See* Hoeft, Tr. 91, 107; PX26 at 4–5, 7–8. Despite these deviations from ASTM 388-05, Mr. Hoeft alleged that his tests conformed to this ASTM standard. Hoeft, Tr. 199–200, 202; PX26 at Exec. Summary. His tests found a lignite content of about 10.3 percent. PX26 at Exec. Summary.

2. The June 2006 Report

For his June 2006 Report (PX27), Mr. Hoeft performed core sampling that he also asserted had complied with the ASTM standards. PX27 at Exec. Summary. Mr. Hoeft claimed that lignite makes up "about 12.3%" of Wyodak's seam. *Id.* However, the core samples that Mr. Hoeft took for purposes of his June 2006 report also were not whole seam samples; instead, Mr. Hoeft targeted a specific "zone" where he believed he was likely to find lignite. Hoeft, Tr. 105–06, 209. In fact, Mr. Hoeft only analyzed about seventeen feet of coal for ranking purposes. Hoeft, Tr. 207–09. In addition to failing to use whole seam samples, Mr. Hoeft again did not rank the coal that he collected based upon the average gross calorific values of whole seam samples, as ASTM D 388-05 requires. Instead, Mr. Hoeft used the same vertical incremental testing methodology that he had used in his February 2006 report. *See* Hoeft, Tr. 213–14. Thus, Mr. Hoeft again purported to find alternating layers of what he called "Standard ASTM Rank" lignite and subbituminous coal layered over the top of each other (and, at points, alternating in one-foot layers) vertically in the Wyodak Mine. *See* PX27 at 5.

3. The October 2007 Email

Mr. Hoeft also testified about an October 11, 2007 email (PX28) in which he purported to determine "Standard ASTM Rank" from "five twenty-foot cores" that

---

<sup>3</sup> Mr. Hoeft also reviewed data Wyodak had previously collected that indicated a possible lignite presence at the mine, but these samples were "largely unusable for accurate determinations of rank." PX26 at 6.

Wyodak took in 2007. See Hoeft, Tr. 111–12; PX28. In his email, he concluded that “9.5% of the estimated eighty-foot seam” contained lignite. PX28. At trial, Mr. Hoeft asserted, as he had with his previous reports, that the work he had performed with respect to the core samples in PX28 complied with ASTM standards. Hoeft, Tr. 116. However, Mr. Hoeft again failed to rank the coal using whole-seam samples. Hoeft, Tr. 210–11; Stock, Tr. 281–82. He again “ranked” the samples according to the Btu values of one-foot increments, not whole seam samples. Hoeft, Tr. 211–12; Stock, Tr. 324.<sup>4</sup>

#### 4. Mr. Hoeft’s Tests Were Unreliable

The evidence at trial showed that Mr. Hoeft’s tests did not conform to the ASTM standards and were otherwise unreliable. First, Mr. Hoeft used part-seam samples in his testing, and the ASTM standards require whole-seam samples. Luppens, Tr. 608; PX20 at 1; PX18 at 3. Second, Wyodak presented no evidence to show that any other practitioner in the field of coal testing endorses Mr. Hoeft’s incremental sampling approach, and Mr. Hoeft was unable to cite any academic or other support for this approach. See Hoeft, Tr. 224. Further, the Government’s evidence showed that an incremental, foot-by-foot approach is not geologically supportable. Averaging the Btu content of one whole-seam sample, rather than taking Btu values from each vertical foot of a sample, is appropriate because of coal’s geological origins. Coal begins as organic plant material in a swamp. Luppens, Tr. 581. It becomes coal through a “coalification” process that spans millions of years and subjects the original organic material to heat and pressure. Luppens, Tr. 581, 587. Several contiguous vertical feet in one section of a particular swamp would have the same coal rank because each foot of the original organic material would be subjected to the same levels of temperature and pressure during coalification. Luppens, Tr. 684–85. Mr. Hoeft’s approach, however, sometimes assigned different coal ranks to adjacent one-foot increments. Id.; PX27 at 5. Such a difference in rank simply could not occur as a result of coalification. Luppens, Tr. 684–85.<sup>5</sup>

As Mr. Luppens noted, Mr. Hoeft’s incremental approach produced “apparent” ranks, which are more likely to be incorrect than ranks assigned through the ASTM standards. Luppens, Tr. 689–91; PX18 at 3. One reason apparent ranks are more likely to be incorrect is that several types of organic material (macerals) existed in the peat swamp

---

<sup>4</sup> Mr. Hoeft also testified about samples taken from trains and silos, but his testimony was based solely on a spreadsheet that Mr. Stock had prepared without Mr. Hoeft’s assistance. Hoeft, Tr. 234–35. Further, Mr. Stock and Mr. Hoeft were missing data for the spreadsheet, and had to estimate some of the parameters that Mr. Hoeft used to determine to whether lignite was supposedly present. Hoeft, Tr. 233–34; see also Stock, Tr. 284–85. Therefore, the Court does not find the train and silo tests reliable in determining whether Wyodak’s mine contained lignite.

<sup>5</sup> Coal’s geological development means that averaging the contents of one vertical sample does not “hide lignite” as Wyodak contends. See, e.g., Pl. Post-Trial Response Br. at 34, Dkt. No. 111 (filed Dec. 7, 2017). Rather, as the ASTM standards recognize, there is simply no lignite to hide if the average Btu value of the sample is above 8,300 Btus.

from which the resulting coal originated. Luppens, Tr. 651–52, 665–66. Different vertical arrangements of macerals in the original peat swamp can mean that coal Btu values may fluctuate over a vertical coal sample, but they do not change the standard rank of the coal sample. Luppens, Tr. 665–66. Therefore, apparent ranks are unreliable, and standard ranking through the process set out in the ASTM standards is necessary.

The Court also finds Mr. Hoeft’s arguments about the ASTM standards unconvincing. In particular, Mr. Hoeft appeared to argue at trial that testers using the ASTM standards must use “professional judgment . . . to make [them] apply to the specifics of the situation.” Hoeft, Tr. 146. In other words, Mr. Hoeft believes that the ASTM standards are more like guidelines than standards. That interpretation is convenient because it allowed Mr. Hoeft to create a testing method that found lignite where the ASTM method may have found no lignite; however, it is not credible. The ASTM standards are not general guidelines. Rather, on their face, they are highly specific instructions that samplers must follow in ranking coal. Thus, the Court does not accept Mr. Hoeft’s “professional judgment” as grounds for taking vertical samples in one-foot increments.

Further, the language Mr. Hoeft cited in ASTM D 388-05 does not support his argument. He notes that section 7.1 refers to sampling “part of a coal seam,” and uses this language to justify his part-seam samples. However, read in context, it is clear that “part of a coal seam” in section 7.1 refers to horizontal area, not vertical depth. For example, Section 7.1.2 specifically requires core samples to penetrate “100% of the seam.” Therefore, it is perfectly possible to take samples of one horizontal segment of a coal seam, but every sample taken within that horizontal segment must encompass the full depth of the seam. In contrast, Mr. Hoeft only took samples from portions of the Wyodak seam’s vertical depth. The evidence showed that this method was impermissible under ASTM D 388-05.

In sum, the Court finds Mr. Hoeft’s tests unreliable, and concludes that Wyodak has not shown that an appreciable amount of lignite exists at its mine.

### Conclusion

A coal producer may pay a lower reclamation fee for lignite under SMCRA if it can demonstrate that lignite is present by presenting “satisfactory evidence, pursuant to reliable methods of testing and ranking.” Wyodak, 737 F.3d at 766. As shown above, Mr. Hoeft’s incremental, foot-by-foot approach does not follow applicable ASTM standards, and it is otherwise unreliable. Therefore, Wyodak has not presented satisfactory evidence that lignite is present in its mine, and it is not entitled to a refund of overpaid reclamation fees.



The Clerk is directed to enter judgment for the Government. Pursuant to Rule 54(d), the Court awards reasonable costs to the Government.

IT IS SO ORDERED.

s/Thomas C. Wheeler  
THOMAS C. WHEELER  
Judge